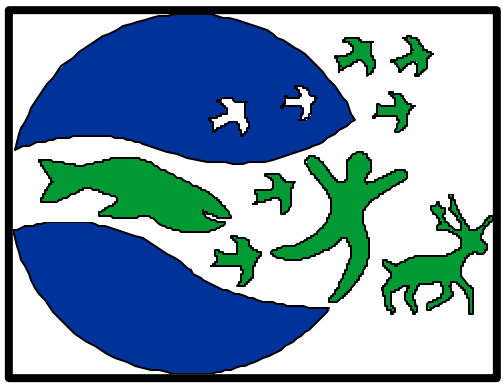
Wright-Patterson AFB, Ohio



Environmental, Safety and Occupational Health (ESOH) Newsletter

February 2003

In This Issue

Battery Training and Safety

Excerpts from AFOSH STD 91-64

Battery shops are primarily used to recharge equipment batteries or to charge new batteries. Personnel who operate these facilities work with hazardous materials and may potentially be exposed to toxic or corrosive chemicals and explosive gases. These personnel must be trained in specific technical and safety procedures outlined in this section. All persons, who do not routinely perform duties in a battery shop and have a need to visit the shop, must receive a safety briefing before entry.

If batteries are installed in a **permanent location**, the requirements of Articles 480 and 500 of National Fire Protection Agency (NFPA) 70, *The National Electrical Code (NEC),* will apply. Ventilate battery shops or rooms to prevent an accumulation of gases. AFOSH Standard 48-2, *Industrial Ventilation,* provides guidance necessary to install general ventilation and hooded ventilation over charging batteries.

Personnel who perform tasks in battery shops will take the following precautions to prevent the mixing of incompatible materials:

- Ensure nickel-cadmium and silver-zinc batteries are serviced in an area isolated from lead-acid batteries.
- When acids and potassium hydroxide are handled in the same shop, ensure the specific equipment for the two types of materials are separated and labeled.
- Do not position or store tools or other metal objects where they may fall onto batteries.
- Workers will wear protective equipment while servicing batteries. This equipment will include, as a minimum, rubber apron and cuffed gauntlet gloves, acid resistant safety shoes or rubber knee length boots with safety cap, face shields (wrap around), and goggles (chemical resistant) that protect from the sides and the front. Workers will not wear finger rings, watches, and other jewelry that may come in contact with batteries. If metal rimmed eyeglasses are worn, secure them by some method to prevent them from inadvertently falling on the batteries.
- When mechanical or other materials handling equipment are used to move batteries, personnel will take precautions to prevent short-circuiting between battery posts.
- Ignition sources are not allowed in battery charging rooms. Post appropriate warning signs at the entrances to the shops or rooms to warn personnel of the hazards.
- Shop supervisors will ensure fire extinguishers of the appropriate types are placed in battery shops or rooms. Coordinate with the base fire department for guidance.
- Keep vent caps in place when charging batteries to prevent electrolyte spray. Remove vent caps only if required by technical data on specific batteries. Do not disassemble a lead-acid battery when taken directly from a charger or when the battery has been discharged under load. (In either case, the battery may be out-gassing and presents an explosion potential.) Do not permit excessive charging of lead-acid batteries, due to the generation of hydrogen gas.

Take the following precautions when mixing electrolyte acids:

- Pour acid into water gradually. Never pour water into acid! (The heat of dilution will cause the water to boil and splatter.)
- Do not pour acid into metal containers or stir solution with metal utensils.
- Use a carboy tilter or siphon to handle electrolyte.
- Use running water to wash down spilled electrolyte. Ensure drains are equipped with an approved holding tank, or if not, capped to prevent the release of hazardous materials into the common sewer system.

Consult your Unit Environmental Coordinator or Environmental Management (77152) regarding the proper disposal of used batteries and (or) acid.

- If electrolyte is splashed on the skin or in the eyes, flush with water for at least 15 minutes and then seek medical attention immediately.
- When taking specific gravity reading, cover the open end of the hydrometer with an acid resistant material while moving from cell to cell to avoid splashing of electrolyte.
- The need for an emergency eyewash and shower in areas where batteries are being stored, serviced, charged, or used is determined by the level of risk of being exposed to hazardous materials. The local functional manager will evaluate the need for portable eyewash bottles to be carried in vehicles when performing hazardous tasks at remote sites. See AFOSH Standard 91-501 Chap. 19 (replaced AFOSH 91-32) *Emergency Shower and Eyewash Units,* for additional guidance.

NOTE: Requests for emergency showers and (or) eyewashes will be routed through the installation ground safety and BE staffs, to determine the need for installation of units.

- Charging 0perations for Powered Industrial Trucks. See Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) 1910.178, *Powered Industrial Trucks,* for additional requirements.

Excerpts from AFOSH STD 91-46

Battery Charging Operations: (See NFPA 505, Section 5-3 for information on charging installation design requirements.)

- Battery charging operations shall be conducted in adequately ventilated areas that are designated for that purpose.
- If batteries must be removed from equipment for charging or servicing, a way to flush and neutralize spilled electrolyte and facilities for quick drenching of eyes will be provided. Only trained, qualified equipment operators shall change or charge batteries. If performing service other than removal and replacement of batteries, operators will wear appropriate protective equipment, i.e., rubber apron, face shield, and gloves. Rings, watches, and similar jewelry will not be worn.
- "No Smoking" signs will be posted in plain view of incoming personnel, to prohibit smoking in the charging area.
- Tools and other metallic objects will be kept away from the top of uncovered batteries.
- When charging batteries, the vent caps will be kept in place to avoid electrolyte spray.
- The battery compartment or covers will be open to dissipate heat.

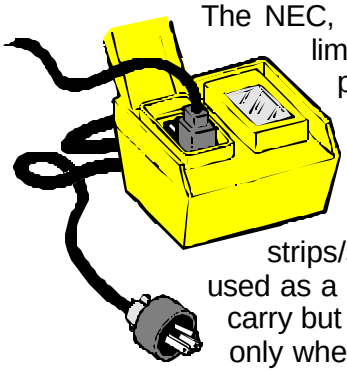
Use of Extension Cords and Surge Arrestors

For laboratory equipment, the use of extension cords should be limited to temporary (less than one day) setups[1]. A standard three-conductor extension cord of sufficient rating for the connected equipment with an independent ground connection should be used. Temporary use is permitted for a period not to exceed 90 days for Christmas decorative lighting and similar purposes.

The rated use of an extension cord can be obtained from the marking tag provided with each cord to indicate the following:

1. Maximum rated voltage
2. Proper type letter or letters for the type of wire
3. Manufacturer's name, trademark or other distinctive marking that identifies the organization responsible for the product
4. The wire size - AWG or circular mil area

The allowed uses for extension cords can be obtained by comparing the markings to Table 400-4 in the National Electric Code (NEC).



The NEC, NFPA 70, defines surge arrestors in Article 280-1 as "a protective device for limiting surge voltages by discharging or bypassing surge current, and it also prevents continued flow of follow current while remaining capable of repeating these functions."

In 1995, the Occupational Safety & Health Administration (OSHA), made an interpretation on the application of OSHA standards to the use of power strips/surge arrestors. OSHA classifies these items as a temporary power tap. When used as a device, defined by OSHA as "a unit of an electrical system which is intended to carry but not utilize electrical energy", a temporary power tap meets the OSHA standards only when they are used to provide transient voltage surge suppression. If being used solely as wiring to provide extra or more convenient outlets then such action is in violation of OSHA code[2], which states that "flexible cords and cables may not be used as a substitute for the fixed wiring of the structure. Therefore, per OSHA and NEC guidelines, surge arrestors/power strips fall under the same usage guidelines as extension cords.

Fixed wiring of a structure applies to facility receptacle outlets as well as the outlets provided in modular furniture. Examples of common items that must be connected directly into fixed wiring include:

Microwave ovens	Refrigerators	Paper Shredders
Coffee makers	Space Heaters	Copier Machines
Toasters/Toaster Ovens	Industrial Electric Fans	

The National Safety Council provides the following guidance on the use, care and maintenance of extension cords[3]:

1. Before using an extension cord, be sure that it is listed by the Underwriters Laboratories or other recognized testing laboratories.
2. Inspect extension cords regularly.
3. To prevent the wire strands from breaking, avoid kinking or excessive bending of the cord.
4. Inspect extension cords before each use. Remove cords with cracked or worn insulation, or with damaged plugs or sockets, from service immediately.
5. Do not splice extension cords.
6. Extension cords should not be connected or disconnected with an electrical load on.
7. Store disconnected extension cords neatly coiled in a dry room at room temperature.

OSHA recommends that the selection of surge protective devices be made following the manufacturer's recommendations for each piece of equipment to have this safeguard. Also, an assessment of the electric branch circuits in the facility should be made to assure there is no potential for an electrical overload where the equipment is used.

A good starting point to satisfy these recommendations is to compare the current load (amps) of the equipment to the rating of the surge arrestor. This information is stamped on each surge arrestor. Never allow the total amperage of all connected equipment to meet or exceed that of the arrestor.

Automated Data Processing Equipment (ADPE) and communication devices such as PC monitors, computers, printers, scanners and FAX machines may have their power cords connected to surge arrestors. Extension cords and surge arrestors must not be connected in "chains". Likewise, an extension cord may not be connected to a surge arrestor.

The requirements regarding the proper use of extension cords and surge arrestors are designed for the prevention of electrical shock and fire. Fire can occur when an overload situation exists and the equipment overheats before the overload is detected by the facility circuit breaker. This can happen because extension cords and surge arrestors add to the impedance of the circuit path.

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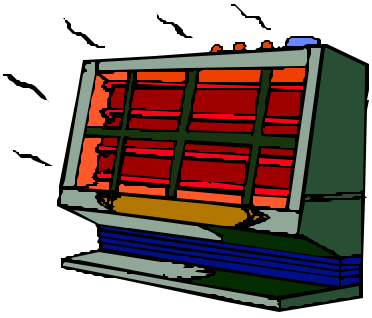
[1] – Prudent Practices in the Laboratory, National Research Council, 1995
[2] – 29 CFR 1910.305(g)(1)(iii), Department of Labor, 1999
[3] – Accident Prevention Manual for Business & Industry, Engineering & Technology, 11th Edition, National Safety Council, 1997

Reminder: Space Heaters Unauthorized



It was brought to the Command Section's attention that there are unauthorized uses of personal space heaters occurring. Please refer to WPAFBI 32-2001, para. 22.6: "Personal electrical space heaters are not authorized for use at WPAFB. If supplemental heat is required, the BCE will provide electrical space heaters which meet fire/safety requirements." Another reference is a 6 Dec 02 Skywriter article. The link to the article is http://www.skywrighter.com/features/2002/1206/13spaceheaters.asp.

Lt Col Frank Albanese, Jr., ASC/CCE (5-5088)

Thanks to Mel French AFRL/HEH for forwarding the above two items

Should You Use Cruise Control on Wet or Icy Roads?

Thanks to Ken Aldrich, AFRL/VA Systems Safety Manager for researching and submitting the following information on Cruise Control (CC):

First off I need to thank our own Steve Markman for bringing this subject to my attention. I'll be honest and say that until Steve asked the question I really hadn't given much thought to not using cruise control under any circumstance. However, after talking with the National Highway Traffic Safety Administration (NHTSA) regarding this issue and with my car manufacturer I'm not so sure anymore. What follows is the e-mail traffic, in chronological order, of this specific question.

Wed 12/11/2002 9:29 AM

Ken,

A friend sent this to me. It doesn't sound quite right. When initially hitting a wet or icy spot, I agree that the tires initially may accelerate and even spin due to all the power behind them. But, as soon as the sensor detects the tire spinning faster, it should attempt to maintain the set speed. This will be independent of whether or not the tire is really gripping the road and driver is in control.

Let me know what you think. Steve

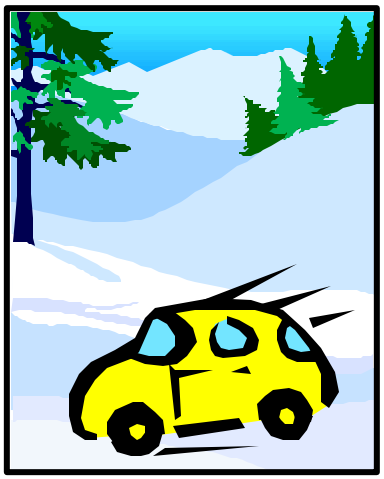
> Subject: Important Safety Warning!
>
> An individual had a wreck a couple of weeks ago and totaled her Lincoln Town Car. She hydroplaned on Hwy 135 between Gladewater & Kilgore, Texas. She was not hurt, just emotionally rattled! She learned a lesson I'd like to pass on to you. You may know this already--but the highway patrolman told her that you should NEVER drive in the rain with your cruise control on. He said if you did and hydroplaned (which she did) that when your tires were off the road your car would accelerate to a high rate of speed (which it did). You don't have much, if any control when you hydroplane and the car accelerates. She took off like she was in an airplane. She is so thankful she made it through that ordeal. Please pass the word around about not using cruise control when the pavement is wet or icy.

From: Paul Tremont, National Highway Traffic Safety Administration (NHTSA)
Subject: Cruise Control Guidance by Our Agency

> Ken, I understand your questions to be:
>
> 1. Does NHTSA put out any guidance on how to use cruise control under wet or icy conditions?
>
> 2. What do cruise control systems do under these conditions if traction is lost due to ice or hydroplaning?
>
> NHTSA does not have guidance on the use of CC. I spoke to one of the engineers here, and this is his view. It depends on the conditions. If the car is on a level surface the CC will attempt to keep rear wheels turning at the same rate...so if traction is lost (most likely on ice) there could be a problem. If the car is climbing, the CC will add more power to sustain speed uphill so again if traction is lost CC could make the situation worse in terms of traction.
>
> However CC is disengaged by touching the brake at which point the driver resumes full control. If the question were, can the disengagement of CC cause a crash, I personally would say no…the driver is responsible to use CC properly and if necessary to add some power after CC is disengaged to reduce the chance of skidding when surfaces are slippery.

I suggest you have people ask their manufacturers for any special guidance on using cruise control during slippery conditions.

Hope this is of some use...
Paul J. Tremont



I then contacted the local highway patrol office via telephone and was told:

"It is not recommended to use cruise control under icy or wet road conditions. If someone were to enter a skid with cruise control engaged then constant power is still being applied to the transmission; which is keeping the wheels spinning. The natural reaction is to take the car out of cruise control by tapping the brakes, which is the last thing you want to do while in a skid as this can make the skid worse."

Also of note during the conversation was the topic of ideal speed for road conditions:

"I've issued speeding tickets to folks who have gone off the road during rainy weather. When they ask why they are receiving a speeding ticket since they were doing the posted speed limit I quote the law to them that drivers are to operate their vehicle at a reasonable and prudent speed commensurate with their abilities and driving conditions. The posted speed limit is for ideal road conditions only (dry pavement, high visibility, light traffic, good tires, etc.) and drivers should adjust their speed down as conditions worsen."

Here are the URLs to a few of the web sites that mention the use of cruise control and inclement weather conditions:

http://www.ama.ab.ca/mission_possible/news_releases/n021011.pdf
http://www.osl.org/winter_driving.html
http://www.esurance.com/Content/ResourceCenter/content/winter_2001.asp
http://www.specialsectiononline.com/Icy_Roads.html
http://www.antony-anderson.com/cruise/1-intro.htm ← Detailed info on how cruise control works

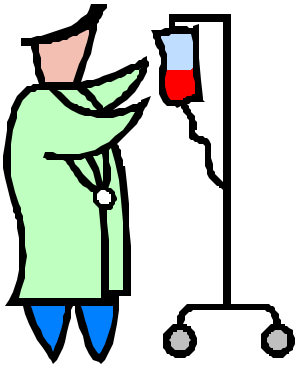
If anyone has any supporting information or information to refute the claims made in this letter please contact me at 5-0049.

Ken Aldrich
AFRL/VA System Safety Manager

AFRL Blood Drive This Month: 12 and 26 Feb

From Gen Reynolds' 3 Feb 03 WIGO:

Blood Supply Low **– "As you might or might not know, last month was National Volunteer Blood Donor Month. But just because the official Blood Donor month has come to an end, that doesn't mean that the need to keep up our blood supplies has come to an end. Imposed deferrals for people who have lived in Europe, plus West Nile Virus concerns have resulted in a recent shrinkage of the pool of available donors--making your donation that much more valuable. Donate now and donate often--someone's life may depend on you."**



Come to the AFRL Blood Drive
12 & 26 Feb 03
Bldg 653 (AFRL/ML) Cafetorium
0800-1430

No reservations required. There will be plenty of free snacks and drinks throughout the day and pizza at lunch. Reserved parking in front of Bldg 653. Bring your ID. Bring a co-worker! Hope to see you there!

Future BLOOD DRIVE DATES for 2003

MAY 14 & 28
AUG 13 & 27
NOV 12 & 26

For more information contact the Donor Center at 70580

Why is YOUR Blood Donation Important?

- 57% of the DoD population is medically eligible to donate blood, yet less than 6% are the quiet heroes who provide blood needed for the entire population.
- The blood you donate is used for military members and their families, home and overseas including in wartime.
- If Wright-Patterson does not collect enough blood, we must purchase blood products from the American Red Cross or other civilian agencies, average cost being $250/unit.
- Blood is perishable and must be replenished constantly.
- Your blood donation can save a life!!

CAP

Linking People to Today's Technology

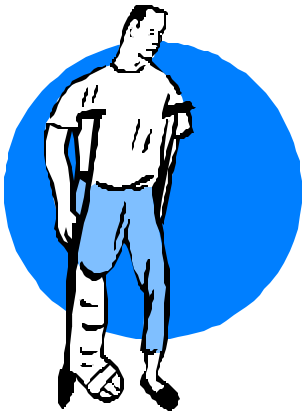
CAP Office Coming to AFRL for Demo

Tues, 25 Mar 03
11:00-2:00
AFRL/ML Cafetorium (Bldg 653)
Open to ALL

The CAP Office provides **accommodation services** and **ergonomic assistance** for DoD employees with **disabilities and/or injuries**, **hearing, speech or visual impairments**, enabling you to be more productive and confident in your work environment. The CAP office can help you with selecting ergonomic keyboards, mice, hands-free headsets, ergonomic chairs, voice-recognition software, and many other services.

Come to the AFRL DEMO, 25 March for:

- Drawing to give away ***Free Equipment***
- Display of Latest Equipment
- Scheduling Workstation Analysis for those interested
- Answering Questions and explaining CAP Services



For more info on CAP Services visit their Website:
https://www.afmc-mil.wpafb.af.mil/ESC/MM/CAP/

or call Nicole Rosser at the CAP Office 71505 or 62860

Wright-Patterson ESOH Web Sites:

ENVIRONMENTAL MANAGEMENT: http://www.abwem.wpafb.af.mil/em/

SAFETY: https://www.asc.wpafb.af.mil/asc/safety/index.html

PUBLIC HEALTH: https://wpmc3.wpafb.af.mil/amds/ph/index.htm

BIOENVIRONMENTAL ENGINEERING: https://www.bio.wpafb.af.mil/

HEALTH AND WELLNESS CENTER (HAWC): http://wpmc1.wpafb.af.mil/pages/hawc/

CAP OFFICE: https://www.afmc-mil.wpafb.af.mil/ESC/MM/CAP/

ESOH Training and Opportunities

RCRA Hazardous Waste Training: Mandatory for all employees who generate hazardous waste. Issue Point (IP) Managers, Hazwaste generators, primary and alternate Initial Accumulation Point (IAP) managers, Unit Environmental Coordinators (UECs), and supervisors of all these individuals must take annual RCRA training.

Initial Training: **20 Mar, 15 May, 24 Jul, 25 Sep, 13 Nov 03**
CLICK HERE to schedule electronically
Or schedule with Susan Dilworth 75627 x223

Annual Refresher Training - AFRL Only
27 Mar, 22 May, 24 Jul, 25 Sep, 13 Nov 03
Schedule with Mary Shelly x59000

Annual Refresher Training - Organizations other than AFRL
20 Feb, 17 Apr, 19 Jun, 21 Aug, 16 Oct, 18 Dec 03
CLICK HERE to schedule electronically
Or schedule with Susan Dilworth 75627 x223

Environmental Compliance, Assessment and Management Program (ECAMP) Training (ENV220)

This course is designed to give students knowledge to successfully plan and execute an internal or external compliance assessment (such as ECAMP), prepare required reports, and direct the follow-up actions. For more information on the course visit AFIT's Website (http://cess.afit.af.mil/env_020/default.htm).

You must sign up for the course through your Training Focal Point (TFP). Contractor registration should be coordinated through their assigned organization's TFP. Additional paperwork is required for contractors to attend this course.

For more information contact
Karen Thompson, 88 ABW/EMO at 72010 x 211

Environmental, Safety and Occupational Health (ESOH) Awareness Training

16 Apr, 15 Jul, 22 Oct 03

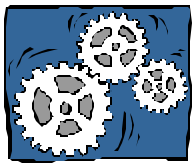
Sign up with Mary Shelly x59000

This course covers a broad range of topics and requirements that apply to all of us at Wright-Patterson, including mandatory training requirements. This course is highly recommended for all employees on Base, including contractors. Supervisors are highly encouraged to attend.

CPR Training

Required for electrical and confined space workers per 29 CFR 1910.151. The American Heart Association recommends CPR refresher training every two years and the American Red Cross recommends CPR refresher training every year. CPR training (per the American Heart Association) is **taught at the Base Hospital every Tuesday** provided that there are enough students for a class.

Contact Marcia Wilson at x79347.



Operational Risk Management (ORM)

To sign up, contact Chuck Swankhaus at 43390

ORM is a tool anyone can use to help with planning and decision-making in order to reduce or eliminate potential risks and increase efficiency. The Safety Office (ASC/SEG) has made two ORM briefings available over the Internet. Click on the following links to learn more about ORM:

Awareness Level ORM Training:
https://www.asc.wpafb.af.mil/asc/safety/orm/exec_training.ppt

Level II ORM Training: ***https://www.asc.wpafb.af.mil/asc/safety/orm/orm_level_ii_training.ppt***

Public Health Training for 2003

All Training will be held at 1400 in the Public Health Classroom in building 675, located in Area B. If needed, more classes will be added to the schedule. To sign up for training or work specific education, please contact Public Health at 255-2515.

Hazardous Communication (HAZCOM)

7 Feb, 25 Apr, 25 Jul, 24 Oct 03

This course is a Train-the-Trainer course that provides mandatory HAZCOM training to supervisors and safety reps responsible for their organization's HAZCOM program. Must have previously had general Hazcom.

Hazcom training per 29 CFR 1910.1200 is required for all employees who use, handle, or may be exposed to hazardous materials upon initial assignment to that job (if not already receiving Chemical Hygiene Training per 29 CFR 1910.1450). HAZCOM refresher training is required whenever a new chemical or hazardous process is introduced into the work area or it is evident an employee needs refresher training. Otherwise, there is no "annual" requirement for HAZCOM training.

Ergonomics Training

21 Feb, 23 May, 22 Aug, 21 Nov 03

Open to all interested DOD and military workers. Focus will be on Repetitive Motion Illnesses. If you would like in-depth ergonomic training that is more job specific, Public Health is available to do that on a one-to-one basis.

Reproductive Hazards in the Workplace

14 Feb, 9 May, 8 Aug, 7 Nov 03

Open to workplace supervisors, safety reps, and any interested Base personnel.

Laser Hazards

7 Mar, 13 Jun, 12 Sep, 12 Dec 03

Open to workplace supervisors or Safety Reps.

Asbestos Awareness

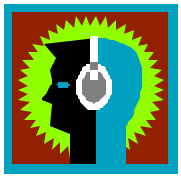
21 Mar, 20 Jun, 19 Sep, 5 Dec 03

Mandatory for all building managers and CE personnel.

Hearing Conservation (General)

14 Mar, 2 May, 11 Jul, 26 Sep, 14 Nov 03

Open to all base employees, recommended for all employees routinely exposed to noise.



Hearing Conservation (Supervisors)

28 Feb, 4 Apr, 6 Jun, 22 Aug 03

Mandatory for all supervisors and safety reps working around hazardous noise.

Chemical Hygiene
28 Feb, 18 Apr, 27 Jun, 5 Sep 03
Open to all AFRL supervisors and safety reps.

OTHER PUBLIC HEALTH TRAINING AVAILABLE UPON REQUEST

Cadmium	Carbon monoxide
Cold Stress	Heat Stress
Lead	Personal Protective Equipment
Respiratory Protection	Universal Precautions/ BBP
Benzene	Formaldehyde

Health and Wellness Center (HAWC)

Call 904-WELL (9355) to get the latest schedule of classes. Class sizes are limited. All classes require pre-registration but are free. Classes will be held at Hangar 22 (Bldg 571) Area B - Wright Field Fitness Center. Many briefings can be individualized and brought to your organization.

The Physical Therapy Flight offers a satellite clinic at the Health and Wellness Center (HAWC) on Tuesdays and Thursdays. All base employees are eligible to be seen by the physical therapist. Hours of operation are from 1100-1300 Tuesdays and Thursdays. Appointments are available, or you may be seen on a walk-in basis.

To schedule an appointment or for more information, please email Annette.Crawford@wpafb.af.mil, or call the HAWC at 904-WELL (9355).

If you have any suggestions for this newsletter or if you would like to be added / removed from the distribution list, please contact Mary Shelly at (937) 255-9000.

Joe R. Thompson III, 18, hangs onto utility wires as he waits for emergency workers to rescue him after an auto accident in Blue Springs, Mo.

And finally, another great reason to wear your safety belt!

High-Wire Act Helps Teenager Survive Crash

ASSOCIATED PRESS

KANSAS CITY, Mo., Jan. 28 - A teenager was catapulted at least 25 feet in the air during an auto accident but grabbed onto overhead utility wires like an action hero and dangled for about 20 minutes before a rescue crew brought him down by ladder.

JOE R. THOMPSON III, 18, was treated for bruises and scratches at a hospital and was released. "God was definitely in control," he said. Thompson lost control of his Jeep on Monday evening after another car suddenly turned in front of him. Thompson's Jeep clipped the other car and rolled over and over, possibly five times, witnesses said.

The Jeep's fiberglass top was ripped off, and Thompson, who was not wearing a seat belt, flew through the air, bouncing off three power lines and falling onto what he thinks was a telephone wire and grounding wire. His leg caught in one wire, and he grabbed for the other "I just kept saying a prayer over and over," he said Tuesday from his home in the suburb of Blue Springs. Sgt. Ray Myers of the Blue Springs police said Thompson was "bear-hugging" the wires when help arrived. The wires were insulated, but the power lines above him had to be turned off before the rescue ladder could be raised.

The driver of the other car, Justin B. Elam, of Olathe, Kan., came immediately to check on Thompson. "I just started saying, 'Dude, turn off my car.' He looked around at first, he couldn't find me. Then he looked up and saw me," Thompson said. Meanwhile, Thompson's father had rushed to the scene. "I was told he was hanging on for dear life," Joe Thompson II said. "I didn't know they meant he literally was hanging on for dear life." The father said his son was talking the entire time. "We asked him how long he could hold on, and he said, 'I can hold on as long as it takes.' His arms were turning blue because it was cold, but otherwise he was fine," the elder Thompson said. "And don't forget, this is a great story to remind people to wear seat belts."

Thanks to Larry Stulz, 445 AW/SE for forwarding this article.